

A redescription of *Cecidoses argentinana* (Cecidosidae) and its early stages, with comments on its taxonomic position

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Summary. *Cecidoses argentinana* (Brèthes, 1916) is recorded for the first time from Chile (La Campana National Park), which extends its known range. The adult, larva and pupa are described and illustrated. Comments on the morphological details and bionomics of this species are given. All available data suggest it to belong to the genus *Cecidoses* Curtis, 1835 rather than to the monotypic genus *Oliera* Brèthes, 1916 established to include *argentinana*; consequent generic name synonymy is proposed.

Zusammenfassung. *Cecidoses argentinana* (Brèthes, 1916) wird erstmalig aus Chile gemeldet (Nationalpark "La Campana"). Imago, Larve und Puppe werden beschrieben und abgebildet, die Angaben werden durch Bemerkungen zur Morphologie und Bionomie ergänzt. Alle verfügbare Information deuten darauf hin, daß *argentinana* zum Genus *Cecidoses* Curtis, 1835 gehört. Die monotypische Gattung *Oliera* Brèthes, 1916, die einzig zur Abtrennung von *argentinana* aufgestellt wurde, fällt damit in die Synonymie von *Cecidoses*.

Résumé. *Cecidoses argentinana* (Brèthes, 1916) est observée pour la première fois au Chili (Parc National "La Campana"), ce qui élargit son aire de répartition connue. L'adulte, la chenille et la chrysalide sont illustrés et décrits. Les détails morphologiques et la bionomie de cette espèce sont commentés. Toutes les données disponibles suggèrent qu'elle appartient au genre *Cecidoses* Curtis, 1835. Le genre monotypique *Oliera* Brèthes, 1916, érigé pour inclure *argentinana*, devient ainsi synonyme de *Cecidoses*.

Key words: Taxonomy, bionomics, immature stages, galls, *Schinus polygamus*, *Cecidoses*, *Oliera*, *argentinana*, Neotropical Region.

Introduction

The family Cecidosidae Brèthes, 1916, was established to include, aside of its type genus *Cecidoses* Curtis, 1835, two genera described at the same time as new: *Oliera* Brèthes, 1916 and *Eucecidoses* Brèthes, 1916. In the same paper Brèthes proposed Ridiiaschinidae with a single included species, *Ridiiaschina con-*

gregatella, as a new family with a cecidosid-like larva, commenting that some of its characters were shared with the Micropterygidae and Eriocraniidae, while at the same time differing from the Cecidosidae. Subsequently, Becker (1977) revised some of Brèthes' species, and proposed that the genera were no more than a subordinate group within the Incurvariidae. However, Nielsen & Davis (1985) recognised the validity of the Cecidosidae and considered Ridiaschinidae to be a synonym. The constituent genera share the following synapomorphies: epicranial suture absent, retinaculum-frenulum coupling absent in the male, hind-wing costa with hump, abdominal segment I without tergo-sternal process; larvae cecidosid-like, apodal, without stemmae, and with numerous secondary setae. Finally, Davis (1987) recognised the existence of four genera for the Neotropical region and at least one genus for the Ethiopian region.

This paper contains a redescription of *Cecidoses argentinana* (Brèthes, 1916), whose larvae form galls in *Schinus polygamus* (Cav.) Cabr., and extends the geographical range of the species to include Chile. Similarity in morphological structures of this species suggest it to belong to the genus *Cecidoses* rather than to *Oliera* to which it was originally assigned (see below).

The specimens used in this study and referred throughout the text were collected in La Campana National Park, sector Ocoa (32° 57' S — 71° 08' W), V Region of Chile, during 1992–1993 and are now deposited in the Museum of Zoology, Universidad de Concepción, Concepción, Chile.

***Cecidoses argentinana* (Brèthes, 1916), comb. n.**

Oliera argentinana Brèthes, 1916: 127, 139.

Oliera argentinana Brèthes, Becker, 1977: 80, 83, 84.

Material examined. Chile. 2 ♂, Parque Nacional La Campana, Sector Ocoa, March–April 1993, F. Sáiz leg. 9 larvae and 36 pupae, *ibid.*, October–November 1992, Sáiz leg.

Male (figs. 1, 2). Forewings greyish, with black scales dispersed over the anal vein, middle region, and external region. Hindwings whitish-grey. **Genitalia** (figs. 3, 4, *a*). Uncus absent; socii consisting of a pair of oval setigerous lobes; transtilla extended, with posterior portion oval; valva broad at base and distal end,

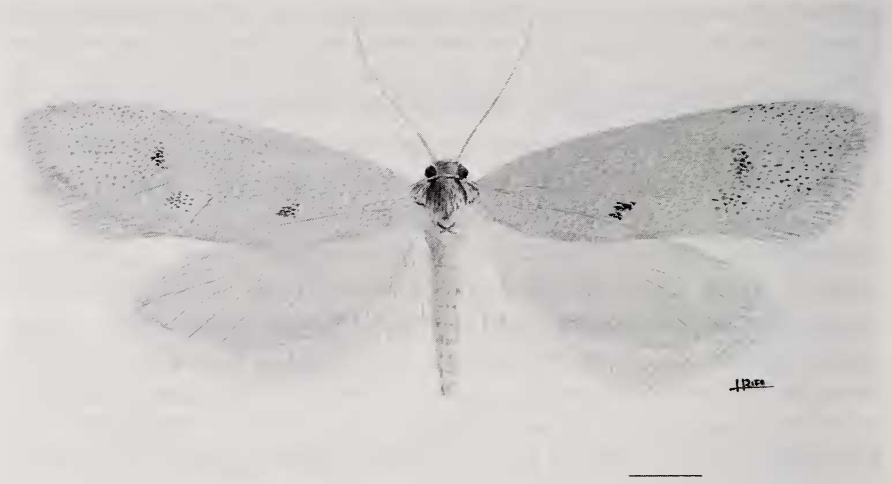


Fig. 1. *Cecidoses argentinana* ♂ (reference bar 2 mm).

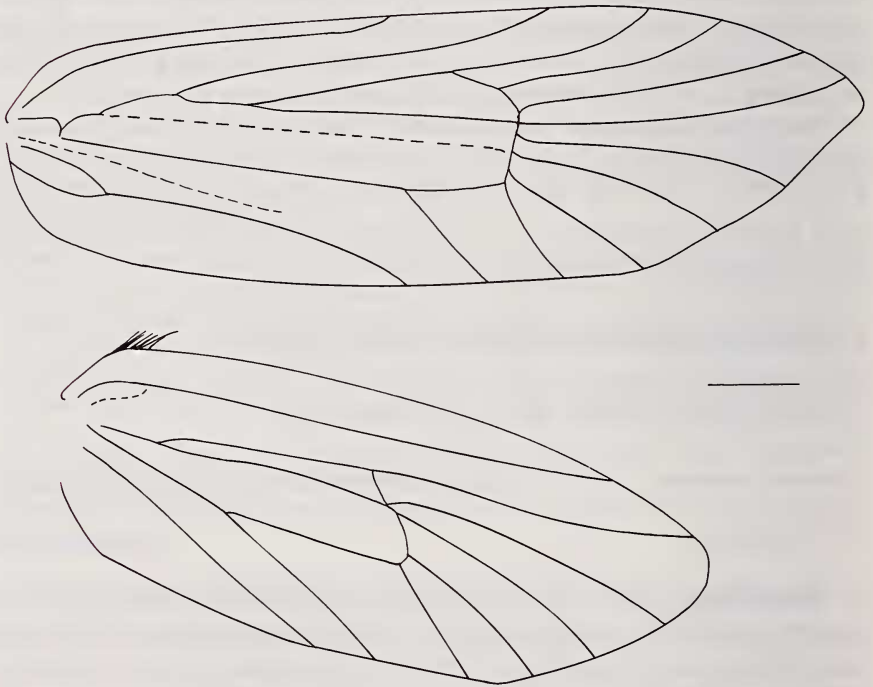


Fig. 2. *Cecidoses argentinana* ♂ wing venation (reference bar 1 mm).

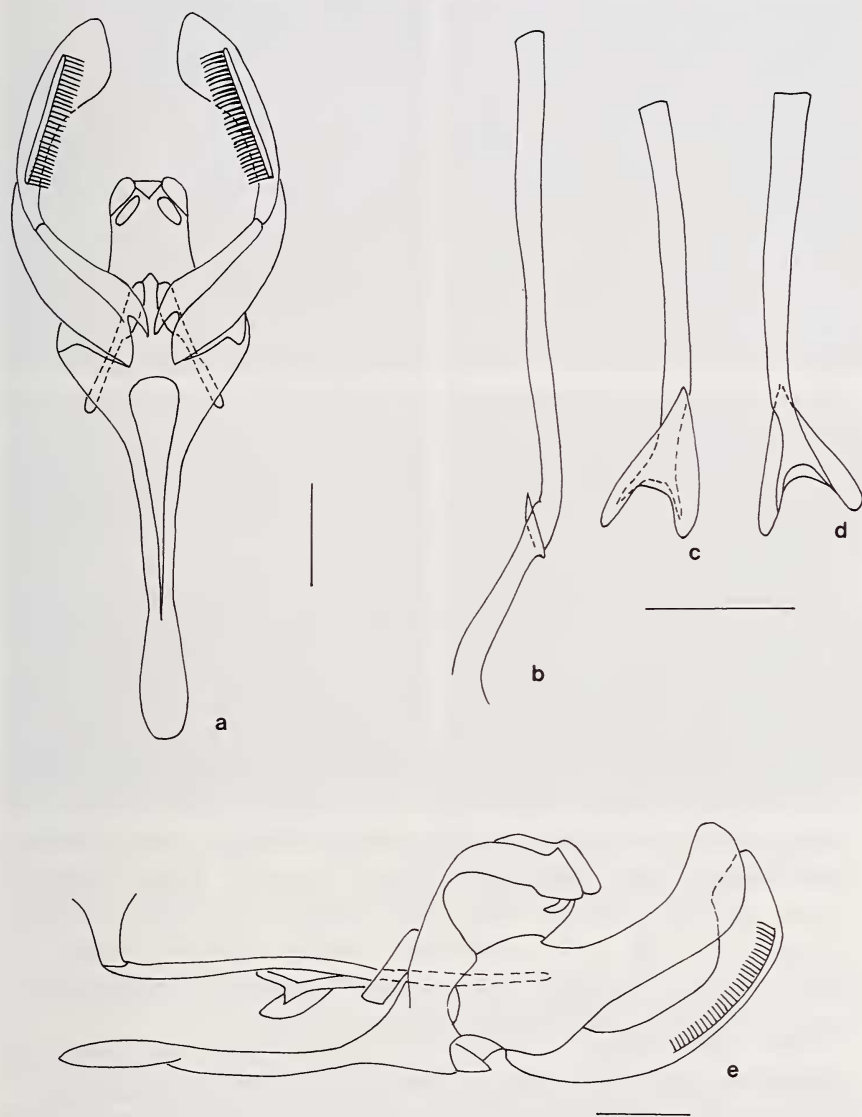


Fig. 3. *Cecidoses argentinana*, male genitalia: *a* — ventral view, *b* — aedeagus, *c*, *d* — juxta: dorsal (*c*) and ventral (*d*) view, *e* — male genitalia, lateral view (reference bar 250 μ).

constricted in the middle, length just shorter than the vinculum; one prominent sessile pectinifer with long pegs on ventral margin of valva. Vinculum forked. Juxta long and slender, anterior part sagittate. Aedeagus long and slender, vesica unarmed.

Female. Unknown.

Larva (figs. 4 b-d, 5). *Head* (fig. 4, *b*). mostly prognathous, chaetotaxy as illustrated on figures 4, *b*, *c*; two stemmae per side; labrum small, subquadrate; mandibles with five sharp teeth. Hypopharyngeal complex (figs. 4, *c*, *d*) with labial palpus reduced to one segment; spinneret tubular to conical, basal plate extending one-third the length of spinneret.

Prothorax (fig. 5). D1, D2, SD1 and SD2 on cervical plate, L1 below and anterior to spiracle; SV trisetose, SV3 ca. half length of SV2 and SV1; V1 below ambulatory calli.

Meso- and metathorax (fig. 5). D1 minute, D2 shorter than D1 of prothorax; SD1, SD2 and L1 in a line and equally spaced; SV trisetose, SV2 and SV3 ca. one-third length of SV1; V1 below ambulatory calli.

Abdomen (fig. 5). A1-A7 similar, D1 minute, D1 ca. half length of D2; L1 below and posterior to spiracle, L1, L2 and L3 forming a right angle; SV unisetose; V1 present; A8, with SV bisetose. A9 with D2 twice as long as the preceding D2; L3 far from L1 and L2; SV absent; V1 present.

Pupa (fig. 6). Obtect, brown, maximum dimensions 5.8×2.9 mm. Ventral view (fig. 6, *a*): antenna and forelegs of similar length; mid and hindlegs slightly longer than forelegs; labial palpus and haustellum absent; maxillar palpus present; vertex smooth, frontal ridge (gall-splitter) truncated, conical. Dorsal view (fig. 6, *b*): abdomen nearly one-third length of hindwing; A2-A10 with a row of spines, A2 with 13, A3-5 with 11, A6-7 with 8; A8-10 fused.

Host and biology. The larvae formed galls connected to branches of the host, *Schinus polygamus* (Cav.) Cabr. (Anacardiaceae), with a kind of a short stalk. Some of these galls were associated directly to the bases of lateral buds and others were observed to form in the same place as future buds, indicating that the galls are most likely derived from the main branch (Sáiz, pers. comm.). In Chile this species has only one brood, March and April being the flight period of the adults.

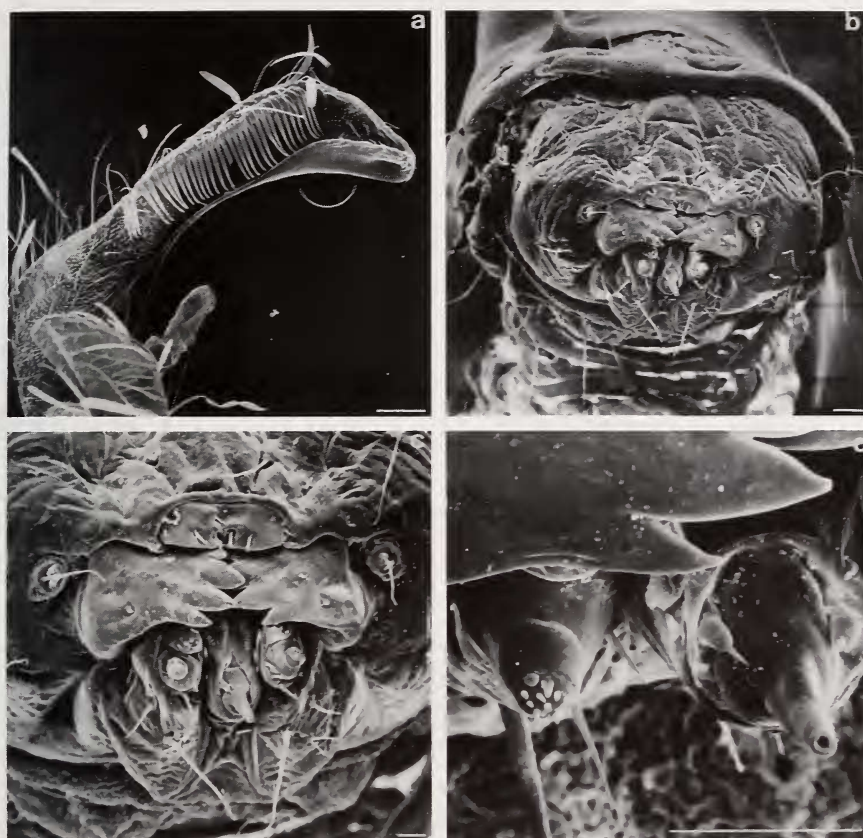


Fig. 4. *Cecidoses argentinana*. Electron scanning photographs: *a* — male genitalia: valva and pectinifer, *b-d* — larva: head, frontal view (*b*), labrum, mandible and hipopharyngeal complex (*c*), detail of the spinneret (*d*). (reference bar 100 μ).

Distribution. Parque Nacional La Campana, Sector Ocoa (32° 57' S — 71° 08' W) (V Region of Chile) and Buenos Aires (Argentina).

Comments and discussion. The genus *Oliera* Brèthes, 1916 was originally established as monotypic for *Oliera argentinana* Brèthes, 1916. However, the original description does not involve genitalic armature characteristics. A comparison of genitalic and other characters, like wing venation, to those of *Cecidoses eremita* Curtis, 1835 (type species) and *C. minutanus* (Brèthes, 1916) suggests *argentinana* to belong to the genus *Cecidoses*, and thus

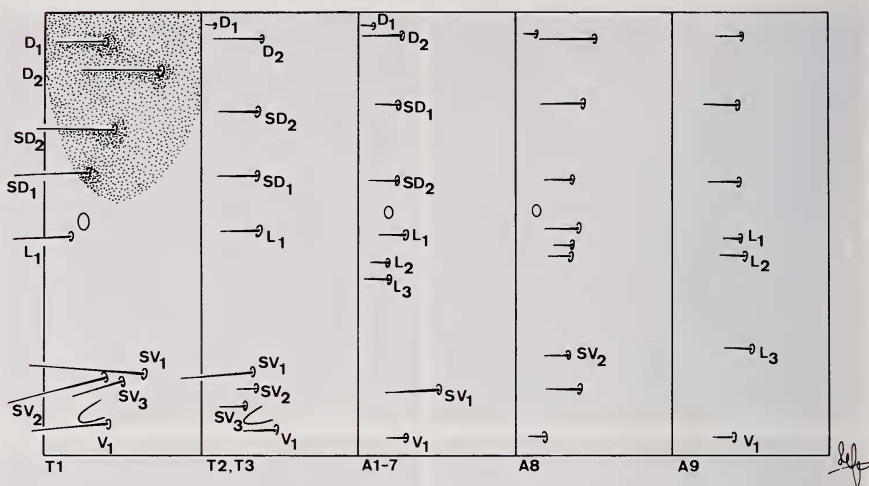


Fig. 5. *Cecidoses argentinana*: larval chaetotaxy.

provides a conclusive proof to establish a synonymy: *Cecidoses* Curtis, 1835 = *Oliera* Brèthes, 1916, **syn. n.**

Moreover, Brèthes (1916) indicates that the larva forms galls below the bark, whereas a closer analysis most likely shows that the larva of this species forms galls similar to those of *C. eremita* (Sáiz, pers. comm.), which appear to look like a fruit. It is possible that Brèthes (1916) misinterpreted this character which, if understood correctly, also makes sense to suggest this moth species to belong to the genus *Cecidoses*.

The range of the host plant *Schinus molle* (Cav.) Cabr. (Anacardiaceae) is extended over Argentina, Bolivia, Chile, and Uruguay (Cabrera, 1939; Rodríguez *et al.*, 1983; Hoffmann, 1989) most likely indicating a tropical origin of the insect feeding on it. The populations of this plant species on the Chilean side of the Andes have different ecological and habitat preferences than those on the Argentine side due to the Andes uplift, which created a barrier between two geographical areas allowing differentiation to take place, although the morphological characters have remained undifferentiated.

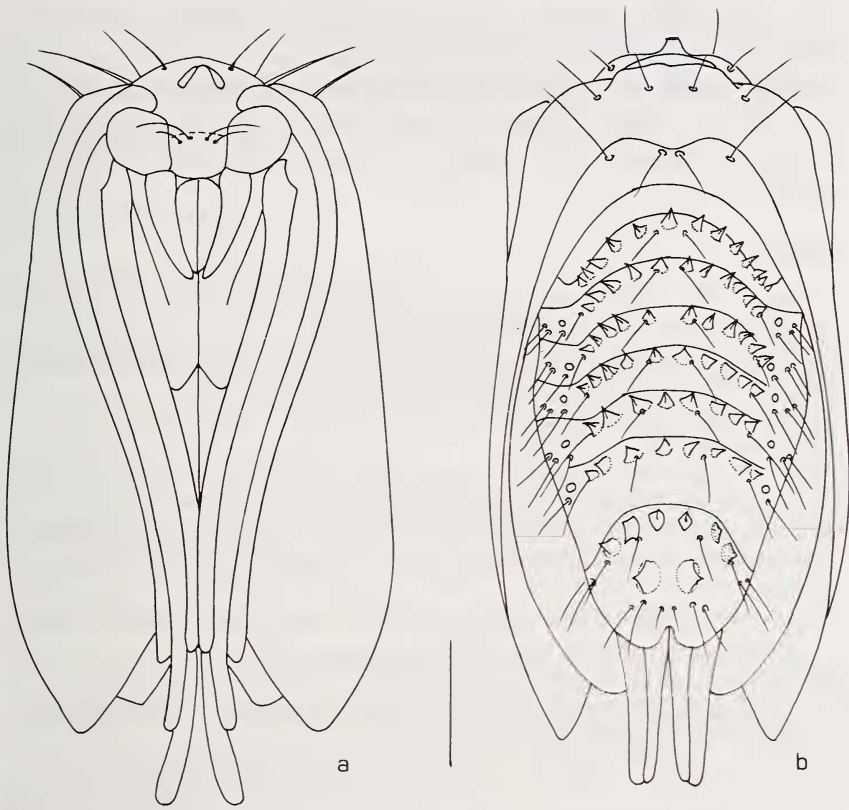


Fig. 6. *Cecidoses argentinana*, pupa: a — frontal view, b — ventral view (reference bar 1 mm).

Acknowledgements

I am greatly indebted to the following institutions and persons who made this study possible: Agencia Española de Cooperación Internacional (AECI), Instituto de Cooperación Iberoamericana, for providing a postgraduate grant during the time this study was undertaken, Dirección de Investigación of the Universidad de Concepción, for funding this publication (No. 92.38.26-1), Dr. Francisco Sáiz, of the Universidad Católica de Valparaíso who sent me the specimens for the present study, Dr. M. Shaffer, The Natural History Museum, London, U.K., Dr. Axel O. Bachmann, Museo Argentino de Ciencias Naturales, Buenos

Aires, Argentina, and Dr. Vitor O. Becker, EMBRAPA-CPAC, Planaltina, Brazil who provided information on specimens in their institutions, Dr. D. Davis, Smithsonian Institution, Washington, D.C., U.S.A., who assisted in determination of the moth and, finally, to Thomas H. Ogden for translation of this paper to English.

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